ABSTRACT OF THE DISCLOSURE

The invention relates to an acceleration and displacement sensor having a position signal generator, a signal-detecting and arithmetic unit, a power supper unit and a rolling ball. The position signal generator forms a closed space for defining the movement path of the rolling ball. The position signal generator includes a plurality of sensing terminals aligned to one another in axial direction. Each sensing terminal represents a certain position signal value. The position signal value of the sensing terminal, where the rolling ball is located, will be continuously given to the signal-detecting and arithmetic unit. When the rolling ball is forced to move in axial direction, the signal-detecting and arithmetic unit can calculate different position signal values and obtain their change during a certain time period, thereby determining the displacement distance and the acceleration value.